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ABSTRACT

Past research has shown that there are predictable relationships among personality types, work values, and occupational interests. A study was conducted to compare graduate students of industrial psychology with graduate students of business administration with regard to hypothesized differences in work values and personality types. It was hypothesized that the psychology group would consist of social types with intrinsic work values, while the business group would consist of conventional types with extrinsic work values. Psychology (N=44) and business administration (N=92) graduate students completed Holland's Vocational Preference Inventory to determine personality type and Super's Work Values Inventory to determine work values. Support for the hypothesis regarding personality types was found for the psychology group but not for the business group. Although differences between groups were found, the hypothesis regarding intrinsic and extrinsic work values was not supported. While the personality types of the psychology and business groups were found to differ, the evidence suggests that, based upon the theoretical relationships between dominant types and Holland's occupational codes, the two groups shared similar personality characteristics and occupational interests. (Author/NB)

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WORK VALUES AND PERSONALITY TYPES: A COMPARATIVE STUDY OF TWO OCCUPATIONAL INTEREST GROUPS

A THESIS

Presented to the Department of Psychology

California State University, Long Beach

In Partial Fulfillment

of the Requirements for the Degree

Master of Science

By Alan John Hardcastle

BA, Western Washington University, Bellingham, 1981

May 1984

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WORK VALUES AND PERSONALITY TYPES: A COMPARATIVE STUDY OF TWO OCCUPATIONAL INTEREST GROUPS

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ABSTRACT

WORK VALUES AND PERSONALITY TYPES: A COMPARATIVE STUDY OF TWO OCCUPATIONAL INTEREST GROUPS

By

Alan John Hardcastle

May 1984

The purpose of this study was to compare graduate students of industrial psychology with graduate students of business administration with regard to hypothesized differences in work values and personality types. Past research has shown that there are predictable relationships among personality types, work values and occupational interests. Holland's Vocational Preference Inventory (VPI) served to categorize each subject into one of six personality types. Super's Work Values Inventory (WVI) reflected intrinsic and extrinsic work values. It was predicted that the psychology group would consist of social types with intrinsic work values, while the business group would consist of conventional types with extrinsic work values. Support for the hypothesis regarding personality types was found for the psychology group but not for the business group. Although differences between groups were found, the hypothesis regarding

intrinsic and extrinsic work values was not supported. The implications for further research using graduate students were discussed.

CHAPTER ONE

Introduction

In the study of vocational behavior, the concept of values describes what is important to an individual in a particular career or occupation in the work world. In this respect, values deal with an individual's personal orientation; what aspects of a career or job are important, and what qualities or elements are deemed desirable (Ivey, 1963). Thus, values are descriptive of the needs of a person, and are relevant to the type of satisfaction available for those needs. Work values, as an extension of values, refer specifically to a set of concepts which mediate between a person's affective orientation and classes of external objects offering relevant satisfactions (Zytowski, 1970).

While work values are often explained in the context of a person's vocational interests, values and occupational interests differ. Values relate to important objectives which are sought in behavior. Occupational interests are the activities or means by which values are sought. Thus, work values determine the goals or desired outcomes towards which an individual's behavior is directed (Super, 1970a). A number of theorists consider

appropriate work values to be essential to the vocational development and adjustment of the individual (Ginzberg, Ginzberg, Axelrad, & Herma, 1951; Herzberg, 1966; Super, 1970b). Super (1970b) describes values as qualities desired by people in their activities, life situations, and acquisitions. In this sense, the vocational behavior of an individual is directed toward the satisfaction of personal values. Kalleberg (1977) points out that values should be distinguished from needs; while the two concepts are closely related, a value presupposes an awareness, at some level, of the object or conditions sought, while a need does not. In addition, Kalleberg asserts that values regulate behavior and determine emotional responses.

Work Values and Occupational Interests

There is strong supporting evidence which links occupational interests to values (Duff & Cottgrove, 1982; Ginzberg et al., 1951; Rosenberg, 1957; Super, 1957). While goals may be seen to reflect the values that people strive to maintain, occupational interests represent activities and the objects through which they attempt to obtain them. Generally, it has been found that persons with similar occupational interests have similar work values (Chong, 1977; Ivey, 1963). Kinnane and Suziedelis (1962) investigated work values and occupational interest

patterns using undergraduate students from several different academic concentrations. They found a high degree of relationship between work values and occupational interest patterns. Security, economic, and material values were:

> Significantly and positively associated with predominance of interest patterning in the physical science, technical and business detail groups, and inversely related to biological science, social science and literary-legal groups. (Kinnane & Suziedelis, 1962, p. 146)

Motivational Theories

Herzberg's (1966) motivation-hygiene theory classifies factors of job satisfaction and productivity into two categories: job content and job context factors. The content factors include such things as achievement, recognition, advancement, and the work itself, while the context factors include working conditions, interpersonal relationships, wages, and company policy. The content factors are positive and growth-oriented, acting to satisfy a person's desire to grow psychologically. The context factors, on the other hand, are theorized to be maintenance factors; they enable a person to avoid unpleasant situations and to satisfy basic needs. Based upon these assumptions, Herzberg contends that the content factors contribute to the positive satisfaction of an individual, and are therefore called "satisfiers." The

context factors, on the other hand, serve primarily to prevent job dissatisfaction: no matter how well maintained, however, the context factors have little effect on positive job attitudes and are therefore called "dissatisfiers."

Work values have been discussed in terms of intrinsic and extrinsic qualities by several researchers (Centers & Bugenthal, 1966; Gade & Peterson, 1977; Miller, 1974; Super, 1970a). Intrinsic qualities describe values associated with the higher-order needs of psychological growth and development, such as achievement and creativity. Extrinsic qualities describe values associated with lower-order needs such as security and belonging. In Super's (1970a) manual for the Work Values Inventory (WVI), he notes that most work values can be used as factors which describe intrinsic or extrinsic values. Miller (1974) proposed that the WVI scales can be logically dichotomized based upon item content to form work value clusters which represent intrinsic and extrinsic groups of work values. This intrinsic-extrinsic dichotomization is analogous to Herzberg's (1966) use of content factors and context factors in describing elements which affect job satisfaction and productivity. In relation to work values, these factors can be seen as elements which are intrinsic (content) or extrinsic (context) to overall job satisfaction.

Personality Characteristics and Occupational Interests

The relationship between personality characteristics and occupational interests has become an increasingly important issue in the study of vocational behavior. Holland's (1959) theory of vocational choice proposes that most people can be categorized as one of six personality types: realistic, investigative, artistic, social, enterprising, or conventional.

> Each type is a summary of what we know about people in a given occupational group, in an ideal or theoretical sense, and is the product of a characteristic interaction between a variety of cultural and personal forces, including peers, parents, social class, culture, and the physical environment. (Holland, 1973, p. 2)

By comparing a person's attributes with those of each model type, it is possible to determine which type a person most resembles.

A second concept within Holland's (1973) theory is that there are six types of environments which complement the six personality types, and that each environment is dominated by the corresponding personality types. Thirdly, Holland contends that people search for environments that will allow them to exercise their skills and abilities, express their attitudes and values, and take on agreeable problems and roles.

A fourth assumption made by Holland (1973) is that a person's behavior is determined by an interaction between

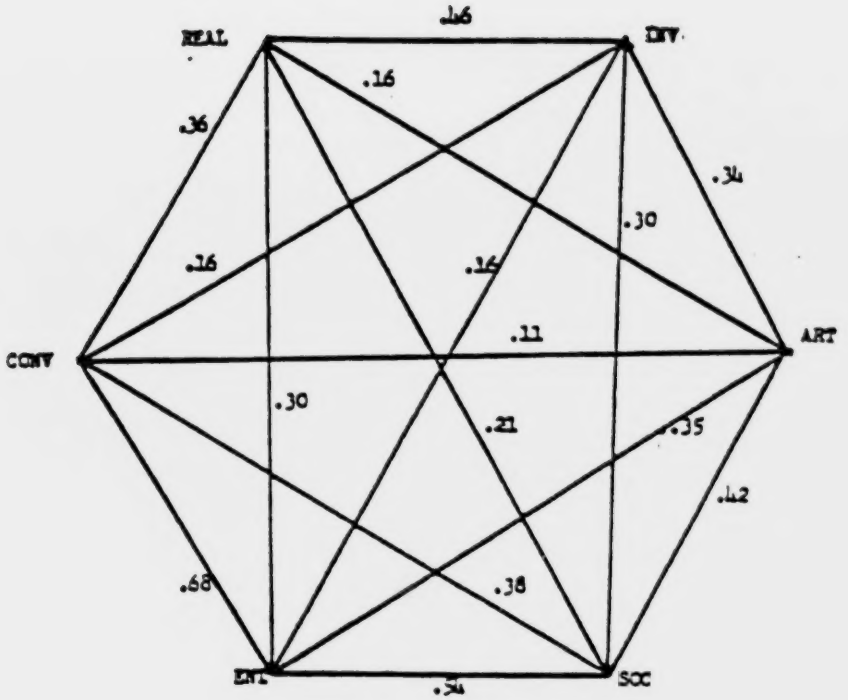
the individual's personality and the characteristics of the environment. Some secondary assumptions which Holland has added include the ideas of consistency, differentiation, congruence, and calculus.

Briefly, the idea behind consistency is that some pairs of personality types are more closely related than others, and that there are degrees of consistency which may affect vocational preference. Differentiation refers to the presence or absence of several types or environments; a person who closely resembles a single type is said to be well defined, while a person who resembles many personality types would be labeled undifferentiated or poorly defined. This idea holds true for environments as well. The concept of congruence states that different types require different environments; realistic types are most successful in realistic environments because the opportunities and rewards offered are congruent with the individuals' personality type. Incongruence occurs when a person with particular personality characteristics lives in an environment that provides opportunities and rewards foreign to the person's preferences and abilities.

The calculus is a hexagonal model which represents the extent of relationships within and between the types and environments, in which the distances between them are inversely proportional to the theoretical relationships

between them (see Figure 1). For example, artistic and social types are more similar than artistic and conventional types. It could also be said that artistic and social environments are more similar than artistic and conventional environments. This spatial arrangement enables definitions of both consistency and congruence of persons and environments. In this way, the internal relationships of the theory are defined and organized by a single geometric model. Holland (1973) proposes that the hexagonal model provides an abstract method of linking together the main ideas so that the theory can be applied to practical as well as theoretical problems. Because a person may resemble more than one type, Holland's model allows for a profile of types based upon a 3-letter occupational code which illustrates a combination of the three highest types according to the hexagonal model. The first letter of the code defines the major characteristics of a person or environment, while the remaining two letters indicate the subtypes associated with a person or environment. For example, the code "REC" would indicate a primarily realistic personality type, with enterprising and conventional characteristics.

Among the research generated by Holland's theory are studies which tend to support the hypothesis that a



(Numbers show relationships among personality types.)

REAL= Realistic
INV = Investigative
ART = Artistic
SOC = Social
ENT = Enterprising
CONV= Conventional

Figure 1. Holland's hexagonal model.

person, in making a vocational choice, searches for environments which satisfy personal orientations and objectives (Scott & Day, 1972; Williams, 1972). However, a study conducted by Frantz and Walsh (1972) found that, in a graduate school environment, regardless of the dominant interest or personality type, most departments constituted primarily an intellectual environment. In that study, then, the relationship between environment and personality type could not be supported because the various environments were relatively similar.

Allport (1961) proposed that values exist at one level of a hierarchical organization of personality and that work values, as an extension of general values, should be an integral part of personality. Accordingly, Allport purported that it is reasonable to expect that work values will exhibit some relationship with personality variables.

Most relevant to the present study are the findings of Hales and Hartman (1978) and Williams (1972). These studies provide evidence of relationships between work values, personality types, and occupational choice. Using a populations of undergraduate students as subjects, Hales and Hartman (1978) found that people of differing personality types tend to differ in work values, thus supporting the hypothesis that personality and work values

are related. However, the study did not control for the variable of occupational choice. Therefore, the study provides no evidence for a relationship between personality types and values in a specific occupational environment.

The purpose of William's (1972) study was to determine the relationships among personality factors, value patterns, and occupational choice, as determined by academic major. Using 145 male graduate students, Williams classified each subject as one of Holland's six personality types based upon academic major. The resulting classification scheme was as follows:

1. Social: Counseling and Guidance majors.
2. Artistic: Art, Music, and Speech majors.
3. Investigative: Biology, Chemistry, and Geology majors.
4. Realistic: Chemical Engineering, Electrical Engineering, Mechanical Engineering, and Geography majors.
5. Conventional: Accounting and Business Education majors.
6. Enterprising: Economics, Educational Administration, Marketing, and Political Science majors.

Williams then issued each subject a series of value scales and personality questionnaires, including Holland's Vocational Preference Inventory, the

Allport-Vernon-Lindzey Study of Values, the Miller Occupational Values Indicator, and the Cattell and Eber 16 PF Scale. Results showed that value patterns and personality characteristics of the subjects were generally consistent with the theoretical formulations for each category in the Holland classification system and were significantly related to occupational choice; the subjects had selected vocations that were congruent with their values and hypothesized personality type. Another finding was that work values and actual personality characteristics were significantly related to occupational choice. These results give further support to Holland's theory which suggests that a person deciding on a vocation looks for an environment which will satisfy personal orientations and needs.

In summary, review of the relevant literature shows strong support for Holland's (1959) theory of relationship between personality characteristics and occupational choice. Also, evidence exists that there are predictable relationships among personality types, work values, and occupational choice.

The present study tested the general hypothesis that personality types, work values, and occupational choice are interrelated. The hypothesis was tested by comparing graduate students in business administration with graduate

students in industrial psychology, based upon Holland's (1959) theory of personality types and environments, and Herzberg's (1966) motivation-hygiene theory.

William's (1972) study supported Holland's (1959) theory in part by showing that business environments consist primarily of "conventional" personality types, while psychology environments consist primarily of "social" personality types. Industrial psychology, however, is in many regards closely tied to the world of business and may therefore bear some fundamental similarities to the environment of business. Thus, one of the purposes of the present study was to see if the personality types found in the business and industrial psychology environments differ. Second, it follows from the literature that different personality types have different values related to work. Accordingly, another purpose of this study was to determine whether or not the work values of the individuals in the academic environments of business and industrial psychology were different. Finally, another focus of the present study was to examine the values of the two academic groups in light of Herzberg's (1966) motivation-hygiene theory in order to see if differences exist between groups in terms of intrinsic-extrinsic work value orientations.

Specific Hypotheses

For the purposes of the present study, the occupational choices of students of business versus students of industrial psychology were considered. Interest was the term used to describe interest in an occupation or in an occupational area. Personality type was defined in terms of Holland's (1959) theory of personality types and environments. Work values was the term used to describe the concept of values related to work.

The first hypothesis of this study was that there would be differences in personality types between industrial psychology students and business administration students. Specifically, it was expected that psychology students would consist primarily of social types, and the business students would consist primarily of conventional types.

The second hypothesis was that there would be a significant difference in work values between graduate students of industrial psychology and graduate students of business administration. Specifically, it was hypothesized that psychology students would report higher levels of intrinsic values than business students, and that business students would report higher levels of extrinsic values than psychology students. It was also

expected that within the groups, work values would be relatively similar among group members.

CHAPTER TWO

Method

Subjects

The psychology group was comprised of 44 graduate psychology students enrolled in the master of science-industrial programs at California State University, Long Beach (CSULB), or California State University, San Diego (CSUSD). There were 18 males and 26 females, with a mean age range of 21 to 25. Of this group, 30 members (68%) had some professional work experience. No subject in this group had earned an undergraduate degree in business. All members of the psychology group were sampled from intact classes.

The business group was comprised of 92 graduate business students enrolled in the master of business administration programs at CSULB or CSUSD. There were 60 males and 32 females, with a mean age range of 26 to 30. Of this group, 83 members (90%) had some professional work experience. No subject in this group had earned an undergraduate degree in psychology. All members of the business group were sampled from intact classes.

Materials

Testing materials included Super's (1968) Work Values Inventory (WVI) (see Appendix A), and Holland's (1965) Vocational Preference Inventory (VPI) (see Appendix B). The two inventories were presented in counterbalanced order across subjects. Attached to the end of each testing packet was a questionnaire which asked each subject's gender, age, undergraduate major, and work experience (see Appendix C).

Super's (1968) WVI, employing a 5-point Likert type scale, consists of 45 items which produces 15 scales (three items per scale), measuring what people value and hold important in their work, job, or career. The 15 scales include the following dimensions: Creativity, altruism, achievement, intellectual stimulation, management, associates, economic returns, independence, prestige, security, supervisory relations, surroundings, esthetics, variety, and way of life. Hendrix and Super (1968) found test-retest reliabilities of the WVI which ranged from .74 to .88 (median = .83). The WVI manual discusses the validity of the WVI in terms of construct, content, and concurrent validation. In addition, several comparisons to other testing materials were made, including the Allport-Vernon-Lindzey Study of Values, and the Strong Vocational Interest Blank, and the Kuder

Preference Record (Vocational). According to Gable (1972), the WVI has been shown to be a fairly valid measure of values related to work.

The VPI is a personality inventory based upon attitudes toward various occupations. The VPI consists of 160 occupational titles to which subjects indicate their likes or dislikes. Each subject marks a "Y" on the answer sheet if it is felt that the corresponding occupation is interesting or appealing, or marks an "N" if it is felt that the particular occupation is undesirable or uninteresting. No marks are to be made if the subject feels undecided or unsure about an occupation. This process produces a total of 11 summary scores; the first six (realistic, intellectual, social, conventional, enterprising, and artistic) relate to Holland's (1959) typology of personality. The remaining five scales (self-control, masculinity, status, infrequency, and acquiescence) identify some secondary personality variables. According to French (1965), the VPI reports corrected split-half reliabilities which range from .72 to .95 (median = .85) for males, and from .68 to .90 (median = .79) for females. Test-retest reliabilities ranged from .58 to .87 (median = .74). Sagen (1965) found only two of the VPI scales with reliabilities below .80. The VPI manual discusses the validity of the instrument in terms of construct and criterion-related

validities, and makes several comparisons to other testing materials such as the Strong Vocational Interest Blank, the California Psychological Inventory and the Kuder Preference Record. The manual gives evidence of a moderate level of validity overall, but that the first six scales of the VPI show fair to good validity when compared to the Strong Vocational Interest Blank.

Procedure

All subjects were contacted by addressing groups in person in classroom situations following instructor approval. A brief verbatim explanation of the nature of the study, as shown in Appendix D, was made orally. Testing packets were issued to those individuals who had agreed to participate, and all subjects were asked to read the instructions on the cover sheet while they were recited verbatim (see Appendix D).

The completed testing packets were collected and the participants were thanked.

The WVI was divided into intrinsic and extrinsic scales on the basis of item content and statements in the manual of the WVI, resulting in the intrinsic values of achievement, altruism, creativity, esthetics, intellectual stimulation, and management. The remaining scales (associates, economic returns, independence, prestige, security, supervisory relations, surroundings, variety, and way

of life) constituted extrinsic work values. This intrinsic-extrinsic dichotomization of the WVI has been employed by Gade and Peterson (1977) and Miller (1974). For the purposes of this study, the responses on the WVI represented intrinsic and extrinsic work values for each subject.

The VPI was used as a method to categorize each subject as one of six personality types (realistic, investigative, artistic, social, enterprising, or conventional). Classification of dominant personality type was accomplished by recording the single highest raw score on the basis of the hexagonal model. If, for example, there was a high score tie between the investigative and social scales, with the enterprising scale as the second highest raw score, the subject was classified as a social type because the theoretical relationship between social and enterprising types ($r = .54$) is greater than between investigative and enterprising types ($r = .16$). Thus, high point code is defined as the single highest raw score on the VPI, corrected for ties.

The resulting design consisted of two groups of subjects, with each subject classified as one of the six personality types, and an ipsative measure of intrinsic-extrinsic work values.

CHAPTER THREE

Results

The first hypothesis stated that the psychology group would consist primarily of social types, and the business group would consist primarily of conventional types, based upon high point codes.

Classification of high point codes served to determine the dominant personality types in each group, and allowed an examination of relative frequencies for each type. Table 1 indicates that the psychology group consisted primarily of social types, followed by enterprising, artistic, investigative, conventional, and realistic types, respectively. For the business group, enterprising types were dominant, followed by investigative, artistic, social, conventional, and realistic types, respectively. Thus, support for the hypothesis was found for the psychology group, but not for the business group.

Following the classification of types, chi-square and Cramer's phi coefficient were computed to investigate the relationship between personality types and the two groups. Based upon the significant chi-square value presented in Table 1, the computed phi coefficient value of .36

Table 1

Classification of Dominant Personality Type Based Upon High Point Code on the Vocational Preference Inventory

	Psychology Group		Business Group	
Personality Type	n	%	n	%
Realistic[a]	1	2	2	1
Investigative	5	12	19	21
Social	18	41	9	10
Conventional[a]	2	4	8	9
Enterprising	12	27	36	39
Artistic	6	14	18	20
Total	44	100	92	100

Note. χ^2 (5, N = 136) = 18.45, $p < .005$.

[a]For statistical purposes, the realistic and conventional categories were combined, as the expected frequency for the psychology group was less than 1.00.

indicates a moderate degree of association between personality types and the two groups.

The second hypothesis stated that the psychology group would report significantly higher intrinsic work values than the business group, and the business group would report significantly higher extrinsic work values than the psychology group. It was also expected that within each group, work values would be relatively similar.

The raw scores for the intrinsic scales and the extrinsic scales of the WVI were totaled separately, and one way analysis of variance was conducted to discover if there were differences between the psychology and business groups regarding intrinsic and extrinsic work values. Based upon the work value scores illustrated in Table 2, no significant differences were found between the groups with regard to intrinsic work values, $F(1, 134) = 2.54$, $p = .11$, although the psychology group did score slightly higher than the business group. No significant differences were found between the groups with regard to extrinsic work values, $F(1, 134) = .42$, $p = .52$, with the psychology group scoring slightly higher than the business group.

As a post hoc measure, one way analysis of variance was conducted to examine the differences between the

Table 2

Means and Standard Deviations of Intrinsic and Extrinsic Work Values by Group

	Psychology		Business	
	M	**SD**	**M**	**SD**
Intrinsic Values				
Creativity	12.73	1.62	12.00	2.25
Management	10.70	2.28	10.85	2.30
Achievement	12.98	1.49	12.73	1.88
Esthetics	7.52	2.41	7.52	2.72
Altruism	11.95	2.01	10.69	2.42*
Intellectual stimulation	13.04	1.29	12.87	1.76
Total	68.93	6.38	66.66	8.22
Extrinsic Values				
Surroundings	11.14	2.31	10.62	2.38
Supervisory relations	12.43	1.91	12.41	1.98
Way of life	13.61	1.51	13.15	1.88
Security	10.98	2.52	10.48	3.19
Associates	10.75	2.09	9.79	2.33**
Prestige	11.64	2.17	11.91	2.34
Independence	12.52	1.49	12.87	1.65
Variety	12.68	1.58	12.43	2.04
Economic return	13.04	1.29	12.87	1.76
Total	108.52	11.39	106.83	11.90

*$p < .01$

**$p < .05$

psychology and business groups with regard to individual work values. As indicated in Table 2, the psychology group scored significantly higher than the business group with regard to the work value "altruism," $F(1, 134) = 8.91$, $p < .01$. The psychology group also scored significantly higher than the business group on the work value "associates," $F(1, 134) = 5.34$, $p < .05$.

To examine the similarity of work values within groups, variability among work values was compared to normative data provided by Super (1970a). With the exception of "security" for the business group, within group comparisons did not show any unusual variability among work values.

Several post hoc analyses allowed further investigation of group scores on the VPI. A discriminant analysis was conducted to assess the relative weights of each personality type, and to determine the predictive power of the types in the discriminant function. As depicted in Table 3, the summary of function coefficients identifies the social type as the best discriminator between the psychology and business groups. Of all subjects, 77.9% were correctly classified by the discriminant function (see Table 4). The classification of individuals by group indicates the relatively good predictive power of the VPI as a classification device in this study.

Table 3

Summary of Standardized Canonical Discriminant Function Coefficients for Personality Types Between Psychology and Business Groups

Personality Types	Coefficients
Realistic	.13488
Investigative	-.23113
Social	1.02068
Conventional	-.52550
Enterprising	-.17849
Artistic	-.08723

Note. χ^2 (6, N = 136) = 41.69, p < .001.

Table 4

Discriminant Function Classification Results Based Upon the Vocational Preference Inventory

Actual Group	Predicted Group				
	Psychology		Business		
	n	%	n	%	Total
Psychology	32	72.7[a]	12	27.3	44
Business	18	19.6	74	80.4[a]	92

[a]Combining all subjects, 77.9% were correctly classified.

One way analysis of variance between the psychology and business groups on each scale of the VPI revealed differences with regard to the social and conventional types. As seen in Table 5, the psychology group scored significantly higher than the business group on the social scale, $F(1, 134) = 32.53$, $p < .001$, and the business group scored significantly higher than the psychology group on the conventional scale, $F(1, 134) = 5.67$, $p < .05$.

Table 5

Means and Standard Deviations of Personality Types by Group

	Psychology		Business	
Personality Type	M	SD	M	SD
Realistic	1.75	2.12	2.35	2.53
Investigative	4.45	3.87	5.08	4.31
Social	6.91	4.31	2.96	3.50*
Conventional	2.29	2.33	3.42	2.70**
Enterprising	5.93	3.78	6.15	3.55
Artistic	5.54	4.10	5.09	4.18

*p < .001

**p < .05

CHAPTER FOUR

Discussion

The results obtained in this study support certain aspects of Holland's theory and confirm some of the past research regarding personality types and occupational interests.

For the psychology group, the predominance of social types supports Holland's premise that the choice of vocation is an expression of personality, and that members of a particular vocation have similar personalities. Further support of Holland's theory was provided by the discriminant analysis, which identified the power of the social type in the discriminant function, enabling a fairly accurate classification of individuals into groups. Also, some of the past research using Holland's theory was confirmed by showing significant high scores on the social scale of the VPI for the psychology group.

Perhaps the best explanation for these findings is that, especially with regard to academic background, the industrial psychology graduate students sampled in this study comprised a relatively homogeneous group; virtually all subjects held undergraduate degrees in psychology.

Similar work experiences of several subjects may also have affected the outcomes for the psychology group.

With regard to Holland's 3-letter occupational code, the psychology group characterized an "SEA" orientation, indicating a predominance of social types, with enterprising and artistic subtypes. It seems logical that graduate students of industrial psychology would be social types with interests in enterprising kinds of occupations. For example, a brief description of occupations which are typical of the "SEA" Holland code includes supervisors, directors, and managers (Gottfredson, Holland, & Ogawa, 1982).

Because the business group consisted primarily of enterprising types, the results of this study did not support the findings of past research which examined the personality types of business students.

Several explanations could account for the outcomes for the business group. With regard to past studies using business students, it should be noted that the graduate business students sampled in this study consisted primarily of individuals with undergraduate degrees in areas other than business: anthropology, chemistry, biology, English, speech, engineering, and education, among others.

The effects of experiences outside the academic realm could also account for the outcomes regarding personality

types and occupational interests, since the demographic information indicated that most members of the business group had considerable professional work experience, with several individuals having held positions relevant to their undergraduate major.

Although the business group scored significantly higher on the conventional scale than the psychology group, mean scores for both groups were generally low, and are suggestive of the types of occupations which are most appealing to students pursuing graduate degrees. The enterprising scale of the VPI makes reference to several management-related occupations, while the conventional scale consists largely of lower level business occupations. It seems likely that graduate students would express more interest in occupations which were congruent with advanced training at the graduate level.

Based upon the Holland occupational code, the business group characterized an "EAI" orientation, indicating predominantly enterprising types, with artistic and investigative subtypes. A description of typical occupations for the "EAI" Holland code includes sales representatives, and several managerial and supervisory occupations (Gottfredson, et al., 1982).

To summarize, while the personality types of the psychology and business groups were found to differ, the

evidence suggests that, based upon the theoretical relationships between dominant types and Holland's occupational codes, the two groups share similar personality characteristics and occupational interests.

Several explanations could account for the lack of differences between the psychology and business groups regarding intrinsic and extrinsic work values, especially with respect to occupational interests. Reference to Holland's occupational codes suggests that the groups shared several occupational interests, thus lending support to past research which indicates that persons with similar interests tend to report similar work values. Also, since the academic subject matter of both groups are related, it seems reasonable to expect some similarities with respect to occupational interests and work values.

Even though the business group comprised a relatively heterogeneous group with respect to undergraduate background, there is no reason to suspect that the sample used in this study does not reflect the academic backgrounds of graduate business students in general. However, most of the research conducted in this area used undergraduate business students as subjects. Therefore, further research is needed which examines the work values among graduate students of industrial psychology, business, and undergraduate students of business.

The possible effects of a graduate school "environment," as suggested by Frantz and Walsh (1972), could also account for the similarity between the psychology and business groups on certain work values that represent the values of graduate students in general; intellectual stimulation, achievement, way of life, and independence were found to be among the more important work values for both groups in this study.

The differences which did exist between the psychology and business groups on certain work values may best be explained by considering the relationships among personality types and values. First, it seems logical that the social (psychology) group would rate the work value "altruism" more highly than the enterprising (business) group, because this scale is descriptive of social service values and interests. This is especially true in light of the undergraduate background of the psychology group. A similar argument could be made regarding the work value "associates," which refers to social contacts with fellow workers. The effects of past work history and other nonacademic experiences upon individual responses should also be considered.

Super (1970a) points out that while the 15 values presented in the WVI are socially approved, as a self-report instrument each work value could be subject to

deliberate and/or unconscious distortion. Also, some values may be perceived as more desirable than others, depending upon an individual's interests and personality.

Finally, it is possible that the statistical power of this study was not great enough to reveal significant differences between the psychology and business groups regarding intrinsic and extrinsic work values. Greater control for such factors as sex, age, and undergraduate major may have altered the findings of this study considerably, and could have allowed for a more accurate description of the work values of graduate students in industrial psychology and business administration.

In conclusion, the findings of this study have illustrated in part the complex relationships among the work values, personality types, and occupational interests of graduate students in the fields of industrial psychology and business administration. Further research in this area is needed which addresses the effects of undergraduate majors, past work experiences, and the graduate school environment upon graduate students. Because it is likely that individuals who are pursuing graduate degrees in industrial psychology and business administration may work together in the business environment, the results of this study may add to an awareness of the characteristics of these individuals in the professional world of work.

APPENDIXES

APPENDIX C

QUESTIONNAIRE

QUESTIONNAIRE

(check appropriate space)

MALE (___) FEMALE (___)

AGE:

21-25 (___)

26-30 (___)

31-35 (___)

36-40 (___)

41 or older (___)

UNDERGRADUATE MAJOR _____

WHAT KINDS OF PAID EMPLOYMENT POSITIONS HAVE YOU HELD IN THE LAST THREE YEARS? (please list below)

_____

_____

_____

_____

_____

APPENDIX D

EXPLANATION AND INSTRUCTIONS TO PARTICIPANTS

Explanation

(Author introduces self by name)

I am a graduate student enrolled in the industrial psychology program (here) at CSU-Long Beach. For my thesis I am examining the work values and occupational interests of graduate students.

My study will involve the completion of two inventories which are related to work values and occupational interests. It will probably take less than 30 minutes to complete both inventories.

I would like to invite you to participate as a subject in my study. I will make arrangements to be available to discuss my findings, which should be quite interesting.

(Testing packets distributed)

INSTRUCTIONS

Do not put your name on any of the materials. Complete both inventories; be sure to answer all items.

One of the inventories asks you to use a five-point scale where a "5" means very important, and a "1" means unimportant. In this inventory, circle the number which best represents how you feel about the item.

The other inventory asks you to indicate your likes or dislikes of particular occupations on the answer sheet by blacking-out a "Y" for yes, or a "N" for no, for each occupation. On this inventory, make no marks if you are undecided about an occupation.

Completing both inventories will probably not exceed 30 minutes, but take as much time as you need. Remember, there are no "right" or "wrong" answers on either of these inventories.

After you have completed both inventories, fill out the questionnaire on the last page, fold the testing packet and put it in "The Box".

Thank you for your participation.

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